Official

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In the claims:

Please amend the claims as follows:

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1. (Twice Amended) A network architecture supporting periodic and aperiodic transmission of data comprising:

a network databus;

a plurality of Network Interface Controller (NIC) modules capable of communicating over said network databus, at least one of said plurality of NIC modules acting as a master timing NIC module configured to allocate a first interval for transmission of periodic data over said databus and to dynamically assign variable intervals for transmission of aperiodic data on said network databus, said master timing NIC module including a means of determining what bandwidth is assigned to requests for aperiodic data transmissions based on priority, length and sequence of frames.

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9. (Twice Amended) A network for transmitting data between network interface controllers in a communications system, said network comprising:

a first network interface controller;

a second network interface controller coupled to said first network interface controller, wherein one of said first and second network interface controller comprises a master timing network interface controller;

a plurality of modules coupled to either of said first and second network interface controllers, wherein said modules are capable of requesting transmission of aperiodic data; and

a means for prioritizing an order of transmission of said data and for dynamically allocating variable transmission intervals for each transmission requested based on such prioritization and desired bandwidth.

16. (Twice Amended) A network for transmitting data between modules in a communications system, wherein said data comprises periodic data and aperiodic data, said network comprising;

a master network interface controller, wherein said master interface controller is capable of allocating a first interval for transmission of periodic data over said databus and of prioritizing transmission of said aperiodic data requested by said modules;

a first backplane coupled to said master network interface controller, at least one first module coupled to said first backplane, wherein data is transmittable from one of said first modules along said first backplane to other first modules and said master network interface controller;

a network databus coupled to said master network interface controller;

at least one network interface controller coupled to said network databus;

a second backplane coupled to said network interface controller;

at least one second module coupled to said second backplane, wherein data is transmittable from one of said second modules along said second backplane to other second modules and said network interface controller; and

wherein said first and second modules are capable of requesting transmission of said aperiodic data over said network databus, wherein said requests of transmission are dynamically prioritizable by said master network interface controller.

22. (Twice Amended) A method of transmitting both periodic and aperiodic data in a network system comprising a network databus with a plurality of Network Interface Controller (NIC) modules arranged to communicate said data over said network databus, at least some of said data arriving from a plurality of devices coupled to said NIC modules through a signal backplane, wherein at least one of said NIC modules acts as a master timing NIC module responsible for allocating a first interval for transmission of periodic data over said databus and for allocating bandwidth on said network databus, said method comprising the steps of:

transmitting all periodic data on said network databus during said first interval;

transmitting requests for said master timing NIC module for transmission of aperiodic data;

processing said requests by dynamically assigning variable transmission intervals according to priority and availability of bandwidth on said network databus after transmission of said periodic data;

transmitting a status message to said plurality of NIC modules, said status message indicating what requests are assigned bandwidth on said network databus for transmission of aperiodic data and order of transmission; and

transmitting said aperiodic data over said network databus according to said order of transmission.